CLEMSON UNIVERSITY

Cotton/Soybean Insect Newsletter

Volume 5, Issue #6 **Edisto Research & Education Center in Blackville, SC** **1 July 2010**

Pest Patrol Hotline

There is a toll-free hotline for quick updates on insect problems. I will update the short message weekly for at least as long as the newsletter runs. Simply call the free number **(877) 285-8525** and select the messages you would like to hear (I am #7 on the listing of specialists). The hotline is sponsored by Syngenta Crop Science.

News from Above the Lakes

No news to report this week. Please email me your comments by Wednesday for inclusion in the newsletter.

News from Below the Lakes

A local consultant reported that he is already observing 20% boll injury from bugs in early-planted (April) cotton. However, please note that this damage to the very first set of bolls is usually high because of the low proportion of bolls available to a growing population of bugs. Please see the section below on our new field card publication (Pocket Scouting Decision Aid) that is an aid to properly scouting and controlling stink bugs in cotton.

Jonathan Croft, county agent covering Dorchester and Berkeley Counties, reported that he is starting to see aphids building in some spots of selected cotton fields. Aphids have been a “no-show” so far this season in cotton.

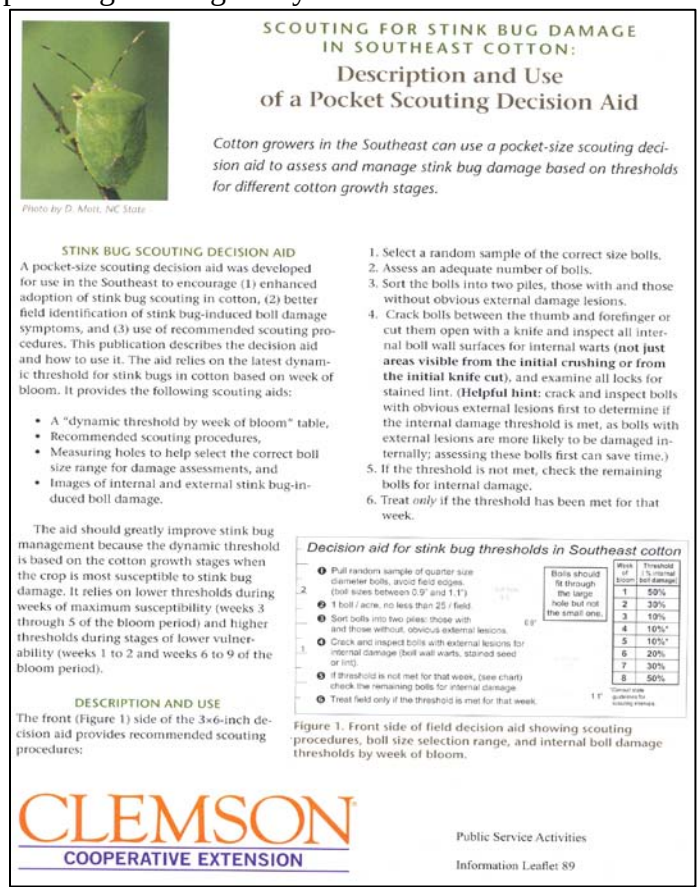
An industry colleague of mine just across the state line in GA is seeing many moth eggs in cotton right now. However, he is flushing primarily tobacco budworm moths in the field. We are starting to see some eggs in cotton, but the numbers have not been high – but they will be building over the next couple of weeks. He is also reporting that the corn earworm infestations in corn are heavy.

Cotton Situation

As of 28 June 2010, the USDA NASS South Carolina Statistical Office had our progress at 35% of the crop as squaring, about equal to where we were last year at 28% and the 5-yr average of 32%. Conditions were described as 6% excellent, 52% good, 38% fair, 3% poor, and 1% very poor for the crop. Overall moisture levels in the state were described as 20% very short, 50% short, and 30% adequate. We have had some scattered, but very strong, thunderstorms within the last few days, so moisture levels could be more positive next week. However, we are in need of a system that can provide widespread rain.

Pocket Scouting Decision Aid for Stink Bugs in Cotton

My colleagues (in NC, VA, GA) and I put together a new publication and field card decision aid for stink bugs in cotton. I have numerous copies of the field card and accompanying explanatory leaflet. I also have lanyards for the field cards. We distributed these at the recent scouting school and will continue to give them away at upcoming meetings. If you would like a set of these new materials, please contact your local county agent.



SCOUTING FOR STINK BUG DAMAGE IN SOUTHEAST COTTON:

Description and Use of a Pocket Scouting Decision Aid

Cotton growers in the Southeast can use a pocket-size scouting decision aid to assess and manage stink bug damage based on thresholds for different cotton growth stages.

Photo by D. Mott, NC State

STINK BUG SCOUTING DECISION AID

A pocket-size scouting decision aid was developed for use in the Southeast to encourage (1) enhanced adoption of stink bug scouting in cotton, (2) better field identification of stink bug-induced boll damage symptoms, and (3) use of recommended scouting procedures. This publication describes the decision aid and how to use it. The aid relies on the latest dynamic threshold for stink bugs in cotton based on week of bloom. It provides the following scouting aids:

- A "dynamic threshold by week of bloom" table,
- Recommended scouting procedures,
- Measuring holes to help select the correct boll size range for damage assessments, and
- Images of internal and external stink bug-induced boll damage.

The aid should greatly improve stink bug management because the dynamic threshold is based on the cotton growth stages when the crop is most susceptible to stink bug damage. It relies on lower thresholds during weeks of maximum susceptibility (weeks 3 through 5 of the bloom period) and higher thresholds during stages of lower vulnerability (weeks 1 to 2 and weeks 6 to 9 of the bloom period).

DESCRIPTION AND USE

The front (Figure 1) side of the 3×6-inch decision aid provides recommended scouting procedures:

1. Select a random sample of the correct size bolls.
2. Assess an adequate number of bolls.
3. Sort the bolls into two piles, those with and those without obvious external damage lesions.
4. Crack bolls between the thumb and forefinger or cut them open with a knife and inspect all internal boll wall surfaces for internal warts **(not just areas visible from the initial crushing or from the initial knife cut)**, and examine all locks for stained lint. **(Helpful hint:** crack and inspect bolls with obvious external lesions first to determine if the internal damage threshold is met, as bolls with external lesions are more likely to be damaged internally; assessing these bolls first can save time.)
5. If the threshold is not met, check the remaining bolls for internal damage.
6. Treat *only* if the threshold has been met for that week.

Decision aid for stink bug thresholds in Southeast cotton

1. Pull random sample of quarter size diameter bolls, avoid field edges. (boll sizes between 0.9" and 1.1")
2. 1 boll / acre, no less than 25 / field.
3. Sort bolls into two piles: those with and those without, obvious external lesions.
4. Crack and inspect bolls with external lesions for internal damage (boll wall warts, stained seed or lint).
5. If threshold is not met for that week, (see chart) check the remaining bolls for internal damage.
6. Treat field only if the threshold is met for that week.

Bolls should fit through the large hole but not the small one.

Week of bloom	Threshold (% internal boll damage)
1	50%
2	30%
3	10%
4	10%*
5	10%*
6	20%
7	30%
8	50%

*Consult state guidelines for scouting intervals.

Figure 1. Front side of field decision aid showing scouting procedures, boll size selection range, and internal boll damage thresholds by week of bloom.

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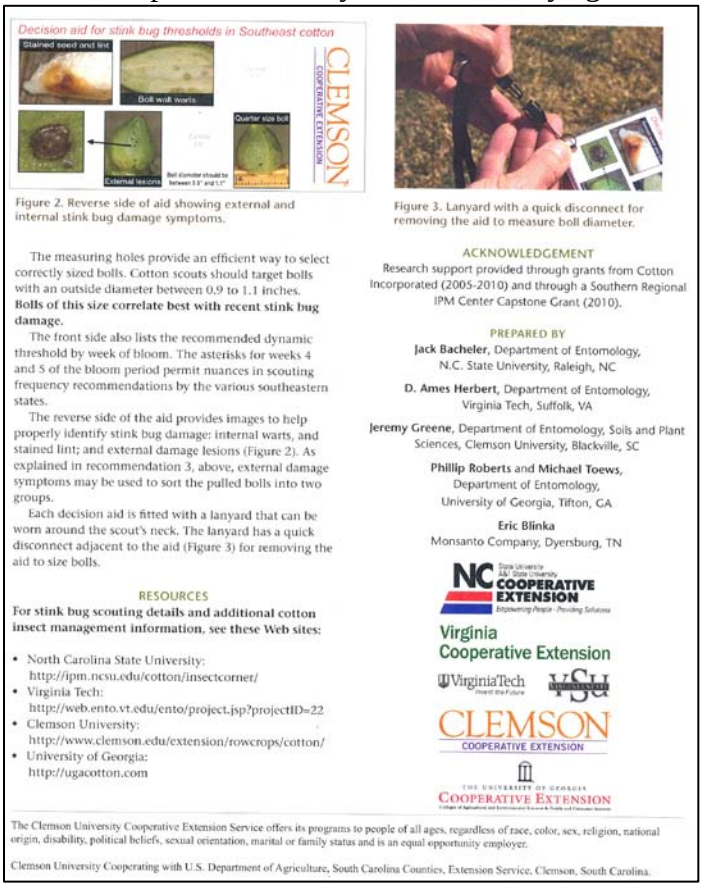
Public Service Activities

Information Leaflet 89



Decision aid for stink bug thresholds in Southeast cotton

Stained seed and lint

Boll wall warts

Quarter size boll

External lesions

Boll diameter should be between 0.9" and 1.1"

CLEMSON COOPERATIVE EXTENSION

Figure 2. Reverse side of aid showing external and internal stink bug damage symptoms.

The measuring holes provide an efficient way to select correctly sized bolls. Cotton scouts should target bolls with an outside diameter between 0.9 to 1.1 inches. **Bolls of this size correlate best with recent stink bug damage.**

The front side also lists the recommended dynamic threshold by week of bloom. The asterisks for weeks 4 and 5 of the bloom period permit nuances in scouting frequency recommendations by the various southeastern states.

The reverse side of the aid provides images to help properly identify stink bug damage: internal warts, and stained lint; and external damage lesions (Figure 2). As explained in recommendation 3, above, external damage symptoms may be used to sort the pulled bolls into two groups.

Each decision aid is fitted with a lanyard that can be worn around the scout's neck. The lanyard has a quick disconnect adjacent to the aid (Figure 3) for removing the aid to size bolls.

RESOURCES

For stink bug scouting details and additional cotton insect management information, see these Web sites:

- North Carolina State University: http://ipm.ncsu.edu/cotton/insectcorner/
- Virginia Tech: http://web.ento.vt.edu/ento/project.jsp?projectID=22
- Clemson University: http://www.clemson.edu/extension/rowcrops/cotton/
- University of Georgia: http://ugacotton.com

Figure 3. Lanyard with a quick disconnect for removing the aid to measure boll diameter.

ACKNOWLEDGEMENT

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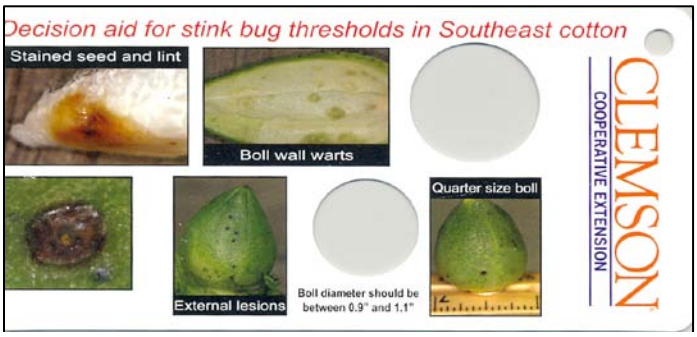

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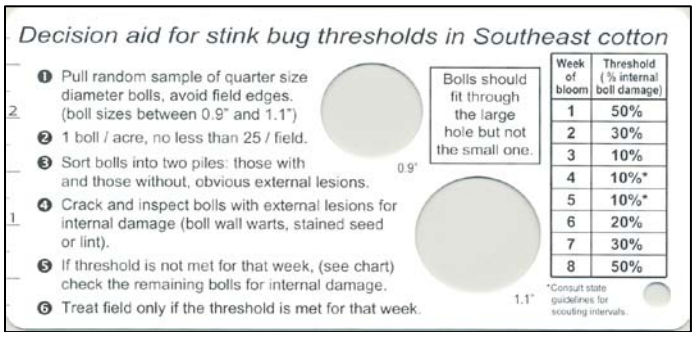

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5. If threshold is not met for that week, (see chart) check the remaining bolls for internal damage.
6. Treat field only if the threshold is met for that week.

Bolls should fit through the large hole but not the small one.

0.9"

1.1"

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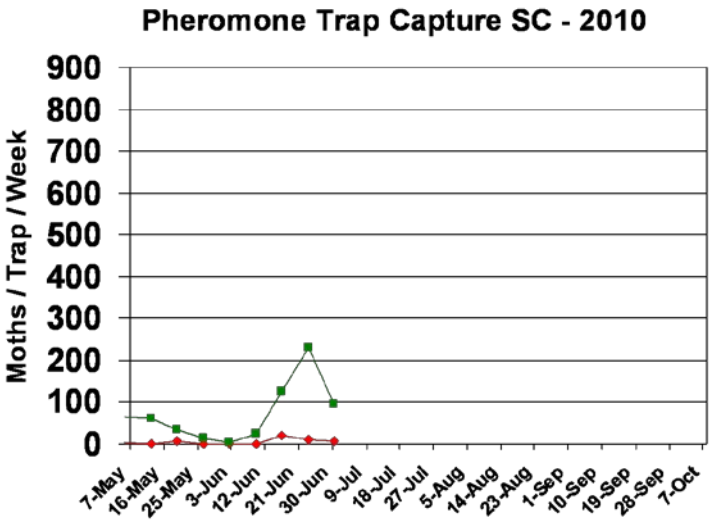
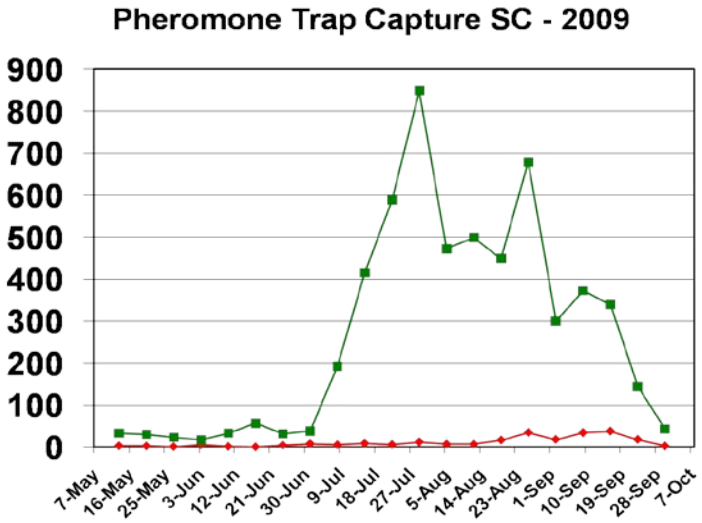
4	10%*
5	10%*
6	20%
7	30%
8	50%

*Consult state guidelines for scouting intervals.

Bollworm & Tobacco Budworm

Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season and last season are presented. The scales on the charts are the same to illustrate where we are compared with last year. Again, trap numbers are tracking about where they usually track. We have not observed a peak this high this early in the season within the last 4 seasons. In past seasons (this is my 5th season back in SC), we have typically observed a small peak in mid-late June, followed by a much larger peak beginning in mid-late July. Because the bollworm continues to be an important pest of cotton and soybean, we will continue to monitor the progress of this pest.





Cotton Insect Control Guide

Clemson University Publication IC97 (Cotton Insect Management) has been revised for 2010 and is available free from your local county office. It is also available online at:
http://www.clemson.edu/psapublishing/PAGES/ENTOM/IC97.pdf

Soybean Situation

As of 28 June 2010, the USDA NASS South Carolina Statistical Office had our progress at 98% of the crop being planted, just ahead of progress last year at 94% and the 5-yr average of 93%. About 87% of soybeans have emerged, ahead of where we were last year and the 5-yr average of 81%. Conditions were described as 3% excellent, 45% good, 44% fair, 7% poor, and 1% very poor. These are observed/perceived state-wide averages.

Grasshoppers – Why Do They Keep Coming Back!

I will be appending the 'grasshopper' section in our soybean insect management guide (SL1) to expand language about the problem with grasshoppers in minimum tillage operations. This is a tough one. Because grasshoppers deposit egg pods/clusters into the soil and we do not destroy a large percentage of those with mechanical means in no-till operations, we have to be very timely and spot on with our controls. Sometimes we deal with re-infestation from the edges of fields but often in no-till fields, the eggs just simply keep on hatching throughout the field. The pyrethroids and OPs (Orthene, methyl parathion) do a fine job on the smaller grasshoppers at medium rates, but higher rates are needed for the larger species. Dimilin, an insect growth regulator, works well on only the immature stage of growth and should be used by those in no-till situations facing constant re-infestation from hatching eggs. The 2-oz rate has done well in the past, but it must be used to combat the immatures only (those without fully functioning wings). It will not work on the adults, so another material (e.g. pyrethroid) will have to be tank mixed to control the adults. Hopefully, the use of Dimilin will help break the life cycle and prevent most of the newly hatched eggs from becoming adult grasshoppers. As I mentioned, this is a tough one.

Adult grasshoppers, far left; immature (nymph) grasshopper, middle; egg cluster of grasshopper, right.

Soybean Insect Control Guide

Clemson University Publication SL1 (Soybean Insect Management) has been revised for 2010 and is available free from your local county office. It is also available online at:
http://www.clemson.edu/psapublishing/PAGES/AGRO/SL1.pdf

Pest Management Handbook - 2010

Insect control recommendations are also available online in the 2010 Pest Management Handbook at:
http://www.clemson.edu/extension/rowcrops/pest/index.html

Need More Information?

Log on to the following web pages to view important cotton management recommendations, data, and historical cotton insect newsletters:
http://www.clemson.edu/public/rec/edisto/research/cotton.html
http://www.clemson.edu/extension/rowcrops/cotton/index.html

Sincerely,

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Associate Professor – Entomologist

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